The fundamental question of action theory is what makes a piece of behavior qualify as an action. We can distinguish bringing something about from something's merely happening to us, but this serves not to answer the question but only to rephrase it. The Causal Theory of Action, various versions of which have been proposed recently, is a plausible approach to this question. Causalism, as we will call it for short, is the view that behavior counts as action just in case it has a certain sort of psychological cause. Such psychological states as intentions, wants-and-beliefs, reasons, and volitions have been put forth as the requisite type of cause. As I hope to show, there are difficulties with present versions of Causalism. They all focus on intentional action and ignore the full range of action. Also, though attempting to account for how action is initiated, they fail to deal with how it is executed. Nevertheless, I believe Causalism to be fundamentally correct. The version to be proposed here seeks to remedy the above difficulties by identifying as the requisite type of cause psychological episodes which do not involve intentionality on the part of the agent and whose function is not merely to initiate action but to carry it through.

I believe Causalism to be fundamentally correct because, so far as I can tell, only it is capable of meeting what seem to me four obvious conditions of adequacy on a theory of action. These may not be obvious to everyone, but rather than defend them, for the sake of brevity I will simply spell out the first three. The fourth, being particularly germane to the causal theory to be developed in this paper, will be defended forthwith.

1. Explanation of action is causal explanation. Thus, a rational explanation does not explain an action unless the reasons cited are causally tied to the action. After all, it is possible to have a reason for acting and to believe that one is acting on it without in fact acting on it.

2. Behavior counting as action is distinguished partly by how it is brought about and partly by how it is experienced by the agent. A theory of action...
must do justice to both the etiological and the phenomenological aspects of action. Causalism is prepared to do this, inasmuch as the cause essential for behavior counting as action is psychological.

(3) On the other hand, it is possible to have the illusion of agency, i.e., while behaving in a certain way, to think one is performing an action when in fact one is not. Clearly no introspective account of action could allow for this possibility, whereas Causalism does, since there is no introspective assurance of the causal efficacy of one’s current psychological state.

(4) Some actions are not, under any description, intentional or, for that matter, written, willing, willed, wanted, deliberate, or rational. Actions lacking all of these features — let’s call them minimal actions — are still actions. They are the only kind of action within the psychological capacity of modestly endowed animals, and a great many of the actions of sophisticated beasts like ourselves are minimal. Existing versions of Causalism fail to account for minimal actions.

I have presented these conditions of adequacy as obvious, though some may find them controversial, and have supposed that only a causal theory of action can meet them. However, I believe Causalism to be fundamentally correct not merely for this reason but because of the basic idea behind it, that behavior counts as action because, and only because, it occurs as a result of something psychological on the part of the agent. There is a special relation between the psychological state of the agent and the behavior in virtue of which the behavior qualifies as action. The problem of agency is to spell out this relation without lapsing into circularity by saying such things as that action is behavior brought about by the person in question or that action is behavior that occurs by virtue of something the person does. On the other hand, an account should not be so reductionistic as to take the agency out of action.

1. THREE PROBLEMS FOR CAUSALISM

There is disagreement among Causalists about what sort of psychological cause qualifies behavior as action. Intentions are one obvious candidate, but Davidson has proposed reasons and Goldman wants-and-beliefs. The disagreement here may be more nominal than substantive, but there is complete agreement, at least among the causal theorists I am familiar with, that every action either is intentional or involves an intentional action. To my knowledge no straightforward reason for thinking this has been given. It seems to be more of a theoretical assumption that a defended claim. For example, despite their radical divergence on the individuation of action, both Goldman and Davidson develop a notion of basic action (Davidson calls it ‘primitive’) designed to provide theoretical order to the obvious fact that in doing one thing, a person does everything specified by each true description of his behavior. Both Goldman and Davidson claim that every action involves a basic action and that every basic action is intentional. Davidson simply assumes the latter, whereas for Goldman it is true by definition, in which case the former claim bears the full theoretical burden. Either way, the supposition that every action either is intentional or involves an intentional action is unsupported.

To me it is just plain obvious that some actions are performed too automatically, routinely, and/or unthinkingly to be in any way intentional. There need be nothing intentional about scratching an itch, doodling, or even tying a shoelace while one’s attention is directed to something else entirely. There need be nothing intentional about brushing aside a nearby fly or ducking under a flying object. Impulsive actions are not intentional, and compulsive actions need not be. Moreover, it seems to me that intentional action necessarily involves conceptual ability not required of action generally, in particular, the capacity for self-ascribing action (thoughts of the form, ‘I will do A’). Animals on the middle rungs of the phylogenetic ladder, not to mention infants and idiots, lack this capacity; they are capable of action but not of intention. Their actions can be but minimal. To be sure, there will be those who say (or who say their intuitions say) that what I call minimal actions, including the reactions, impulsive actions, and animal actions just mentioned, are not actions at all but mere behavior, and I do not know how to reply to them. Perhaps the version of Causalism to be proposed here will alter their intuitions. In any case, there are two other problems for versions of Causalism which assume that every action is or involves an intentional action.

A fact commonly overlooked by causal theorists is that there is more to the causation of an action than its initiation, namely, how it is carried out. A causal theory of action should say something not only about how an action gets started but also about how it gets done. This is ignored by theories confined to intentions, reasons, wants-and-beliefs and the like, as if once an action is initiated, how it is completed is immaterial. An action isn’t just
done—it is done in some way or another, and the agent has something to
do with that. Even when a person forms an intention to do something immedi-
ately, thereby initiating the action, the rest of the action doesn't just happen
by itself, riding the crest of the momentum generated by the intention. The
rest of the action has to be performed. Even if we credited the persistence of
the intention with the continuation of the action, how the action is carried
out would require further explanation. After all, an action can be performed
in different ways, with different degrees of skill, control, effort, and attention.
These are features of action in particular, not of behavior in general, and even
if they are ascribable only to intentional, rational action, it is hard to see how
they could be explained, in ordinary cases, by intentions or reasons.
Conceivably, an agent could intend to do something in a certain specified
way, with a certain degree of skill, control, effort, and attention, but in
general these are not matters of intention. And yet they do seem to have
something to do with the agent's awareness of what he is doing and of what
he is to do. However, this awareness seems below the level of intentions and
reasons, and our primary task will be to give some account of what this level
of awareness is.

There is a third problem for Causalism. A causal theory of action must
not only specify the kind of psychological cause required for behavior to be
action but also exclude aberrant manners of causation. The problem of
'wayward causal chains', as Davidson calls it, is to exclude from the category
of action any behavior having the right kind of psychological cause without
being caused in the right kind of way. Davidson's gives the case of a climber
who

might want to rid himself of the weight and danger of holding another man on a rope,
and he might know that by loosening his hold on the rope he could rid himself of the
weight and danger. This belief and want might so unnerve him as to cause him to loosen
his hold,

and yet his doing so would not count as an action. Goldman thinks he can
solve this problem be requiring the behavior to be caused "in a certain charac-
teristic way", whose specification he leaves for neurophysiology, as if the
matter were irrelevant to the philosophical theory of action. Goldman does
suggest that there is a phenomenological 'feel' to this characteristic way,
but he does not spell out what it is (nor does he subsequently rely on this
feature). He has been criticized for leaving the issue so vacuously unsettled,
but no one, to my knowledge, has proposed a specific solution to the

problem of wayward causal chains as it arises within existing versions of
Causalism. Davidson desairs of doing so. Later I hope to show that the
version of Causalism to be proposed here is immune to the typical counter-
examples involving wayward causal chains to which other versions are subject,
although it does not avoid the problem entirely.

II. REPRESENTATIONAL CAUSALISM

Our second condition of adequacy required that behavior counting as action
is distinguished, whatever the details, partly by how it is brought about and
partly by how it is experienced by the agent. In this regard it might be
suggested that a necessary phenomenological condition for action is a 'sense
of agency', i.e., experiencing one's behavior as one's own doing. This question-
begging way of describing it won't do, of course, but O'Shaughnessy's has
provided some of the details with a vivid phenomenological description of the
difference between experiencing one's behavior as agent and as observer.
Along the way he makes the interesting point that observation (in the
relevant sense) of what one is doing can disturb the action: instead of being
absorbed in what one is doing, keeping in psychological states integral to
performance, one lapses into a detached state that is not only inessential but
downright disruptive. We will return to this phenomenon later.

Contrary to the above suggestion, a sense of agency is not necessary for
action (nor sufficient, because the illusion of agency is possible). For one
thing, an action can go on even when one is detachedly observing it, say if
it is simple and routine, like washing dishes or licking envelopes. But a more
general consideration is that one might do something without either thinking
of it as one's own doing or thinking of it as not one's own doing. One
might think nothing of it at all, though aware of what is being done to the
extent necessary for doing it. This would seem to be how things always are
with animals and infants, who lack the conceptual equipment (the concept
of action and the concept of self) to have a sense of agency. They can act,
but they are unable to think of what they do as actions, much less as their
own actions.

Although the sense of agency is not essential to action, I suggest that a
certain ingredient of it is. This is the awareness, distinct from detached
observation, of one's current and immediately subsequent behavior. Without
this awareness one could neither do what one is doing nor think of oneself
as doing it. In the course of doing something, one does not observe one's
bodily movements as if they were occurring independently of that awareness, as would be the case if, for example, someone else were moving one’s arm. When you are moving them yourself, at each moment you are aware not only of where they are but also of where they are going, and not as if you were predicting where they would go. These awarenesses might be rather vague, say if you were just stretching, but they can be more specific, as when you are playing charades or shooting a basketball. I claim that action, unlike other behavior, essentially involves this experience of what is being done and of what is to be done next, and that it counts as action only if this experience causally interacts with it. In preliminary form this is the thesis of Representational Causalism.

To refine our formulation we need some terminology. Let us call awarenesses of what is being done receptive representations and those of what is to be done effective representations, and label them generically executive representations. For lack of a better reason or a better choice, the terms ‘receptive’ and ‘effective’ were selected by analogy with the physiological concepts of receptors and effectors, while ‘executive’ suggests that both are involved in the execution of the action. The term ‘representation’ was chosen with some misgivings, inasmuch as it has been bandied about rather freely in recent philosophy. ‘Awareness’ and ‘experience’ seemed too amorphous, less tied to particular moments and particular objects, whereas ‘idea’ is too intellectual and ‘image’ exclusively visual. I hope to make clear what I take these executive representations to be, but first let me make explicit certain things that are not implied: (1) that the agent represent his behavior as an action or himself as an agent, (2) that his representations be propositional in form, (3) that his representations be linguistically coded, or (4) that he have any intentions or beliefs regarding what he is doing.

I conceive of action as involving cycles of effective representations, bits of behavior, and receptive representations, in which there is a causal relation between each effective representation and bit of behavior, each bit of behavior and receptive representation, and each receptive representation and the next effective representation. This linear conception is rather simplistic, inasmuch as there is no clear basis for temporally individuating executive representations or, for that matter, bits of behavior. To be truer to the facts, we should perhaps speak of effective representations, behavior, and receptive representations that undergo continuous modification in causal interaction. However, for clarity if inadequacy of exposition, I will persist in using language that suggests clearcut temporal individuation (this is always a problem in speaking of events).

It is important to notice that effective and receptive representations are not defined in terms of their position in the causal sequence of which bits of behavior that make up the action are a part. If this were so, then Representational Causalism would be circular. Receptive representations are representations of current behavior, even if not action, and effective representations are of immediately subsequent behavior, whether or not it occurs (the term ‘effective’ should therefore not be understood to imply that the behavior represented will occur, thanks to the ‘effectiveness’ of the representation). No restriction is placed on how closely the bits of behavior must match the effective representations or on how closely the receptive representations must match the bits of behavior. In any case, executive representations are not defined as causally efficacious – rather, actions are defined as behavior caused by executive representations.

Effective representations are not intentions. Aside from characteristically not being conscious, unlike intentions, they need not represent the behavior as an action on the part of the agent. Moreover, effective representations are more fine-grained than intentions, representing not the behavior as a whole but merely the next bit of behavior (insofar as we can legitimately speak of bits). To be sure, when one acts intentionally or deliberately, these effective representations are integrated into an overall conception of what is to be done, as contained in the agent’s intention, but not all actions are performed with such a conception. However, the thesis of Representational Causalism is that all actions, even simple, routine, and repetitive ones, require effective representations for their initiation and execution. We might accept the hypothesis of such contemporary cognitive psychologists as Mandel that such nonintentional actions involve the activation of well-entrenched sensory-motor systems and their underlying cognitive structures – otherwise it would be hard to explain the coherence of action – but whatever the psychological details, our thesis has it that behavior thus brought about counts as action only if causally efficacious representations are involved in this process.

Whereas Causalism based on intentions, reasons, or the like artificially separates actions from their psychological antecedents, Representational Causalism recognizes that there is interaction for the duration between the agent’s psychological states and what he is doing. As has been noted earlier, an action has to be performed in some specific way or other generally not
intended at the outset, and the effective and receptive representations involved in the execution of action are fine-grained enough to be relevant not only to what kind of action is being performed but to just how it is being performed. The receptive representations can be more or less accurate and more or less precise. The effective representations can also be more or less precise, as well as more or less efficacious, depending on the degree to which what is done corresponds to how it was represented immediately before. Of course, some actions are more routine than others, requiring little if any attention, no decisions or flexibility during performance, hence minimal awareness. Indeed, if the action is not only routine but repetitive, maximal efficiency may require minimal awareness – too much attention may slow one down and cause unwanted variations in performance. On the other hand, a novel, intricate action, like attempting an untried surgical technique, may require continuous, detailed, and accurate awareness of what one is doing. One must be alert to the slightest unforeseen contingency and be ready to alter one’s course of action accordingly.

III. THE NATURE OF EXECUTIVE REPRESENTATIONS

Executive representations are representations of events. Receptive representations are of what is being done (if anything is being done), and effective representations are of what is to be done next. Unlike beliefs and intentions, they are not propositional attitudes nor, though occurrences rather than dispositions, what might be called ‘propositional episodes’. The form of a receptive representation is, most generally, ‘e occurring’ or ‘a F-ing’, and of an effective representation, ‘e to occur’ or ‘a to F’. Inasmuch as these forms are not propositional, there is no copula. Insofar as they can be rendered linguistically, the linguistic forms are not sentential but participial and infinitival, respectively. However, the representations themselves are not linguistic in character or discursive (to use an old-fashioned term), but intuitive. Receptive representations are perceptions. When of bodily movements they are primarily kinesthetic, whereas receptive representations of the object(s) acted on or of the environment can be in any of the five ‘outer’ sense modalities. Effective representations, though not perceptions, are also sensuous. What is to be done next is generally represented kinesthetically in the case of bodily movements, while nonbodily changes can be represented in any of the five outer modalities.\(^\text{12}\)

This general characterization of executive representations needs to be clarified by way of examples. Then we will comment on their nonpropositional form. Let us begin with a few simple examples illustrating how different modalities can be involved in action. Having sucked on a Tootsie Pop for a while, a child is trying to bite through to the chocolate core. He feels the resistance against his teeth of what is left of the hard candy cover. He kinesthetically represents his jaws tightening and his teeth pressing harder and then feels them slowly cracking through, at which point he detects a chocolaty flavor. Finishing it off, he goes to the kitchen. Seeing that the door is closed, he kinesthetically represents his right arm reaching for the doorknob. This representation persists as he sees and feels his hand approaching the doorknob. As his hand approaches it, he kinesthetically represents his fingers grasping it, and as he sees and feels contact, he represents his wrist turning and feels the doorknob turning until he hears a click of the latch and a sudden decrease in the resistance of the door. He represents his arm pushing the door and sees and feels it opening. As he walks through the door, he thinks he smells apple pie baking in the oven. He is not sure, so he represents his nose sniffling and his legs moving toward the oven, whereupon he is overwhelmed by what is unmistakably what he thought it was.

In order to illustrate in more detail how our conception of action operates, let us take the case of a moderately complex but thoroughly minimal action, one that involves no reasons or intentions. (Later we will speculate on the relationships between executive representations and the reasons and intentions involved in nonminimal actions.) While engrossed in the complexities of a philosophical issue I am lecturing on, I feel a slight itch on my back, although I am not conscious of it (I do not think that I have an itch, nor do I think the contrary). Without realizing what I am doing, I reach over my left shoulder with my right arm and start to scratch. I don’t quite reach the itchy spot, even after reaching further. I withdraw my right arm and reach over my right shoulder with my left arm, this time reaching the right spot and thereby relieving my slight discomfort.

All this goes on without any conscious awareness on my part. First I tried to scratch the itch with my right hand and then I succeeded in scratching the itch with my left. Without being aware of any of them, after feeling the itch I had at least the following effective and receptive representations:

- e: itch on back to be scratched
- er: right arm to reach over left shoulder
next. The sequence is tied together by my practical knowledge and sustained by the persistence of the initial effective representation of the itch on my back to be scratched.

Just what sort of sequence is this? It has purpose, even rationality, but does it qualify as practical reasoning? One could say, for example, that going from feeling the itch to representing it to be scratched is to make an inference and that thinking of reaching over one's shoulder to scratch it is coming to a practical conclusion, but such talk seems pickwickian. To claim that it comes to more than that one could construe what I call receptive and effective representations as momentary, nonconscious beliefs and intentions respectively, but this, it seems to me, only adds to the linguistic deflation. However, I do not wish to suggest my talk of executive representations and of applied practical knowledge leaves nothing to be explained. And as I have indicated before, while speaking of these representations as related, purposefully as well as causally, to each other and to bits of behavior, we should not think of them as discrete, individually packaged units. On the other hand, it is awkward to speak of single, continuously changing receptive and effective representations.

Having seen examples of how effective and receptive representations participate in the execution of action, let us look further at their form. It was claimed that they are not propositional attitudes or episodes and cannot be rendered by sentences. Rather, they are sensuous in character but can be rendered linguistically by participial phrases of the form, 'e occurring' or 'a Fing', in the case of receptive representations, and by infinitive phrases of the form, 'e to occur' or 'a to F', for effective representations. Here the question arises of just what this formal characterization of executive representations amounts to. In particular, although they are not discursive or linguistic but sensuous, our use of the infinitive for effective and the participle for receptive representations implies that there is a fundamental difference between the two, even though it is not linguistic. The problem is how to characterize this difference in a meaningful and informative way — without rendering our theory of action circular, e.g., by distinguishing effective representations from receptive by their causal relation to subsequent behavior. Receptive representations pose no special problem, for they are nothing but perceptions (of events). This is not to say that there is no general problem about what perceptions are and how they are to be distinguished in kind from, e.g., memories and imaginings. However, that is not our problem. (Presumably,
they are caused by their objects, but still there is the problem of characterizing just how. The problem for us is with effective representations, whose form we have rendered linguistically as infinitival.

Effective representations are distinguishable from perceptions and memories (of events), which are of present or past events. But how are they to be distinguished from imaginings, in particular from imaginings of events that the agent could (at least try to) bring about? The infinitival form marks the difference, but what does this difference come to and how can it be characterized without our getting caught in the circle mentioned above? That is, how can effective representations be distinguished in terms other than as causing behavior that counts as action? (Besides, there is no guarantee that they always lead to action.) It won’t do to distinguish them from imaginings by saying that they are caused by intentions, for we would thereby exclude action without intention.

One possibility is to say that just as perceptions (and receptive representations in particular) move us to believe, so effective representations move us to act. Just as we cannot say of the former (so it would seem) what it is about them that moves us to believe (or at least inclines us to believe), we cannot say of the latter what it is about them that moves us to act (or at least inclines us to act). Still, we can distinguish them from imaginings, which do not essentially move us (or incline us) to anything beyond themselves. Perhaps this is all we can say at this level of generality, but putting it this way leaves us enmeshed in the circularity generated by the phrase, ‘move to act’. Can we put it any other way?

Perhaps the way to distinguish effective representations from the corresponding imaginings is to say that they move us to expect the changes envisaged. It is true, after all, that we are generally not surprised by the occurrence of the events we regard as our own doing. Indeed, we are surprised if nothing happens. However, to leave the matter at this would make it seem that effective representations are mere auguries of action, and if we add that they cause the changes that count as action, then our causal analysis of action is viciously circular. Despairing of finding any informative, noncircular way to describe effective representations, we are left with our previous characterization of them in terms of their infinitival form. It would be easy to say that they are irreducible or unanalyzable, as philosophers have been content to say about other notions, but all we should say at this point is that we have been unable to say anything informative about them. So we will leave as a problem for further research to give an account of the infinitival form, in terms of which we have distinguished effective representations.

It could be said that we are pursuing a will-o’-the-wisp, that effective representations just are imaginings, imaginings of immediate changes (bodily movements or otherwise). Then the expression, ‘effective representation’, would not designate a sui generis class of mental episodes but those imaginings that fit into the act sequence. We would have to abandon our talk of the infinitival form of effective representations, but our theory of action would not be materially affected.

IV. INTENTIONAL ACTION

Representational Causalism is a causal theory of action that accommodates minimal actions, actions that are not, among other things, intentional under any description or tied to intentional actions. This version of Causalism attempts to embody the basic insight of Causalism, that to qualify as action behavior must result from some idea of it on the part of the agent, without requiring conceptualization of the sort involved in intentions (self-ascription of action). To make the case for Representational Causalism, we have focused on minimal actions but still intentional actions are of primary interest. Accordingly, we need to ask what the relationship is between intentions and executive representations in the performance of intentional actions.

Representational Causalism does not exclude the plausible possibility that the feedback sequence of executive representations and bits of behavior, such as that in the backscratching example above, is, in the case of intentional action, initiated by the agent’s immediate intention to act. Indeed, we could well suppose that this initiating intention in some sense is a guiding intention during the course of the action. Moreover, for an action with components over time, there may be a number of subintentions or, simply, a plan of action, possibly subject to modification during the course of action. Each of these subintentions is activated by the agent’s belief that the appropriate moment has been reached. Despite the presence of these subintentions and beliefs about the current stage of the action, I would suggest that there is still, in most cases, a much more finegrained series of effective and receptive representations, more subtle and specific in their scope than these subintentions and beliefs.

As for the causal relationships involved in all this, it would seem that
whereas intentions can cause effective representations (or, as we have put it, initiate the sequence of cycles of effective representations, bits of behavior, and receptive representations), beliefs about what one is doing as one is doing it are caused by receptive representations as they occur. Indeed, this seems to be just a special case of the causal relationship between perceptions and perceptual beliefs. Unfortunately, neither philosophy nor psychology has yet made much headway in explaining what that relationship is. Here I have merely tried to suggest that while Representational Causality does not require the mental antecedents of action to be conceptual, it does not exclude them from being any. What cannot be overemphasized is that these antecedents, conceptual or not, causally interact with the deed for the duration. There is a series of representations feeding back into the causal chain, not one alone that lasts for the course of the action and somehow keeps it going. It is important to realize that if Representational Causality is correct, there is nothing essentially different, qua action, between intentional action and nonintentional action. There may be important differences, but these do not concern what makes the behavior count as action. The same point applies to the difference between action that is willing, willing, wanted, deliberate, or rational and that which is not. Of course, it would be a task for another paper to elucidate these actions predicates within the framework of Representational Causality. Another such task would be to distinguish particular types of minimal actions, such as reactions and impulsive actions. Finally, there are psychological questions about the nature of sensory-motor patterns, of skills and abilities, and of control and coordination. These questions concern how and how well actions are performed, and seem to have little to do with whether or not the action is minimal (except insofar as thinking about what one is doing may affect performance, favorably or adversely as the case may be).

V. WAYWARD CAUSAL CHAINS AND THE ILLUSION OF AGENCY

The problem of wayward causal chains, as mentioned earlier, is the problem faced by any causal theory of action of how to exclude behavior produced by the right kind of psychological cause (right according to the theory) in the wrong kind of way. Davidson’s example was of a mountain climber whose desire to release the rope holding his burdensome companion causes him, by way of making him nervously agitated, to let go of the rope. His desire is the right kind of cause (according to Davidson), but the way it causes him to let go of the rope disqualifies his letting go as an action. The problem is to characterize the right way.

Davidson’s example is excluded by Representational Causality as a case of action because there is no reason to believe the ‘agent’ has the appropriate effective representation for letting go of the rope. Indeed, Davidson supplies the explanation for the climber’s letting go, his nervous agitation. When we take up examples of more protracted behavior (than letting go of a rope), we see that for Representational Causality the problem of wayward causal chains is circumscribed by the fact that the feedback sequence of executive representations causally interacts with the deed for the duration. For this reason it is much more difficult to imagine a plausible example of wayward causal chains than it is for standard causal theories. For them it suffices to imagine something untoward just before the behavior begins. Nonetheless, it is possible to imagine wayward chains for our theory, however fanciful they may be.

Suppose, to take a simple example, I raise my hand without looking. Our theory requires that for this to be a genuine action, my executive representations must be causally efficacious, but it does not specify how. Now it may seem that what the precise physiological details are is simply irrelevant. The details could be quite different from what I think they are or even from what current physiology says they are (it might be all wrong). However, suppose that what happens this time when I seem to raise my hand is different from what normally happens, whatever that is, even though (in order for the case to be relevant) my executive representations are causally efficacious, however circuitously. Perhaps instead of the usual efferent and afferent neural impulses telekinesis and ESP are at work, or maybe a hidden electrical hookup is responsible. Still, everything seems normal to me. Have I raised my hand? Taking the details to be irrelevant — after all, agents don’t know or believe much about them anyway — I used to think that this was a case of action. However, I came to see that the details can make a difference.\(^1\)

Normally, agents know what they are about to do when they are about to do it and what they are doing while they are doing it, at least if they have any such beliefs at all. Indeed, when merely bodily movements are involved, as in the hand-raising case, the agent knows ‘without observation’, as philosophers sometimes say.\(^2\) However, in the causally wayward cases just imagined, even if the ‘agent’ has a justified true belief that his hand is about to go up and
then that it has gone up, we should not say that he knows these things. If this is so, then it would appear that the problem of wayward causal chains for action is a special case of the Gettier problem for knowledge (what we might call the problem of ‘wayward inference chains’). The ‘agent’ justifiably and truly believes, but does not know, that his hand is about to go up and, a moment later, that it has just gone up. He has the illusion of agency.

The proliferation of literature on the Gettier problem has raised more dust than it has settled, so to subsume under it the problem of wayward causal chains is not to solve but merely to locate the latter. There remains one special question for action, however, and that is to elucidate the idea of knowledge without observation, not only of bodily movements currently going on but of those about to. I will not take up this (or the Gettier) problem here, except to point out that for us it would have to be solved in terms of how effective representations and receptive representations constitute the basis for the agent’s knowing what is about to be done and what is being done. In any case, our formulation of Representational Causalism would have to be revised as follows: behavior counts as action if and only if there is a feedback sequence of executive representations which not only causally interact with the behavior for the duration but also provide the (would-be) agent with the basis for knowing (without observation, for bodily movements) what is about to be done and what is being done during the course of the (would-be) action. We do not require that knowledge actually be provided, for the agent might not even have the corresponding beliefs.

VI. CONCLUSION

It has not been shown that executive representations are part of the causal chain in the behavior we regard as actions. Even their existence has not been established, although we are generally aware of what we are doing while we are doing it and of what we are about to do as we are about to do it. However, we are generally not aware of being aware thus, for we attend to what we are doing, not to our awareness of it. The existence and the role of executive representations are not established by philosophical analysis, but if Representational Causalism is correct, it is possible that no behavior qualifies as action, that our pretension to being agents is uninformed conceit. Nevertheless, if what we regard as action genuinely is action, Representational Causalism, unlike other causal theories of action, has the virtue of dealing with intentional and nonintentional action alike and with the how as well as the what of action. Moreover, it meets the four conditions mentioned at the outset on a theory of action: in particular, the condition (2) that agency be understood partly by how the behavior is brought about and partly by how it is experienced. Indeed, for minimal action the sequence of executive representations constitutes both. For non-minimal action, of course, intentions, beliefs, and desires may causally and experientially enter in as well.

Present versions of the causal theory overintellectualize action. Representational Causalism is a causal theory that seeks to do justice to action of all sorts, not just intentional action. This includes not only animal action but that of our own which lacks the conceptualization required for intentional or even conscious action. It should be plain that considerable refinement of our theory is needed, particularly if it is to serve not only as a philosophical analysis but also as a framework for psychological description and explanation of action. What we need are terms adequate to the task of describing the psychology of action. Not only do we lack at present sufficient means for adequately characterizing executive representations, especially effective representations, we are in need of a pattern of psychological explanation that can treat representations as causes and effects. Both of these deficiencies are magnified by the fact that our very talk of representations and of bits of behavior as determine units is rather artificial. Although these are problems for our formulation of Representational Causalism, they are more far-reaching than that, arising for all theories of perception, memory, and thought that posit representations, linguistic or otherwise, in psychological processes. Until these problems are solved and the framework for a representational psychology is developed in detail, our formulation can be taken only as programmatic, sketching the lines that must be filled in by a causal theory of action that covers not only how actions are initiated but also how they are executed.

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NOTES

1 The requirement that the cause be psychological is, of course, compatible with physicalism. Two well-known versions of Causalism are Davidson’s and Goldman’s. See Donald Davidson, ‘Actions, Reasons, and Causes’, Journal of Philosophy LX (1963), 685–700, and ‘Agency’, in Robert Binkley et al. (eds.), Agent, Action, and Reason
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Brand, op. cit., fares no better than we in trying to characterize the conative feature. 'moving to act', by which he distinguishes the psychological antecedents of action. It is unclear how to distinguish an effective representation from the corresponding imagining in an informative, noncircular way. Nonetheless, we can say what a person's experience is like in the course of behavior; we regard as an action (this way of putting it avoids the circle of importing our analysis of action into our description of the agent's experience). To exclude extraneous factors, let us assume that there is no intention involved. If the behavior is of more than a moment's duration, the person has the sort of experience that O'Shaughnessy (op. cit.) contrasts with observation. The series of effective and receptive representations yield a smooth stretch of experience in which at each moment the person's awareness of what is happening corresponds to at least approximately, to the change he envisaged a moment before. As a mere observer, even if he expected what was to happen, there would not be the same integration between moment-to-moment anticipations of what was to come next and moment-to-moment experiences of what next happened. In action (or what we regard as action) the series of anticipations and experiences is one, whereas in observation the anticipations and the experiences phenomenologically run in parallel, as it were. Symptomatic of this is the fact that an observer can, at will, attend to what is happening or to what he anticipates, whereas a putative agent's attention is undivided between the two.

William James takes a position similar to ours in denying that action must be preceded by an intention or a volition.

Sometimes the bare idea is sufficient, but sometimes an additional conscious element ... has to intervene and precede the movement. The cases without a flat constitute the more fundamental, because the more simple, variety. Wherever movement follows unconsciously and immediately the notion of it in the mind, we have ideomotor action. We are then aware of nothing between the conception and the execution. (op. cit., p. 522)


In an unpublished paper, 'A Non-natural Defense of Non-Naturalism', I once argued that it is perfectly reasonable to hold that ethical language is descriptive, involving the ascription of ethical properties, that no natural properties are ethical, and that there are no ethical properties.

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Prior to Davidson's 'Action, Reasons, and Causes', many philosophers denied that explanation of action is causal explanation. However, Davidson convincingly argues that the explanation of action is rational, that rational explanation is causal. How the point is put depends on one's theory of act individuation. Davidson would individuate an action as that which is intentional or level of act individuation need be made, although certain verbal usages might suggest one rather than another.

Goldman, op. cit., and Davidson, 'Agency'.

There is a conceptual reason why actions need be in no way intentional. Gilbert Harman, in 'Practical Reasoning', Review of Metaphysics 29 (1976), 431–463, argues that intention implies belief. If S intends to do A, then S believes he will do A (if he A). In particular, then, if S intends to do A now, then S believes that he will do A now. Therefore, it is possible that one can do something without then (or at any previous time) intending to do it.

Although some actions need be in no way intentional, some types of action must be, namely, acts of communication. The nature of communicative intentions is spelled out in his book, Language, Communication and Speech Acts (Cambridge, Mass, MIT Press, 1979), Chapters 1–5.


9 The relation of nonlinguistic representations to what is represented is analyzed in Kent Bach, 'Part of What a Picture Is', British Journal of Aesthetics 10 (1970), 119–137.

10 George Mandler, Mind and Emotion (John Wiley & Sons, New York, 1975), Ch. II.

11 Effective representations are not volitions, at least as these have been construed by philosophers. Hugh McCann, in 'Volition and Basic Action', Philosophical Review LXIII (1974), 451–473, construes them as mental actions, and Wilfred Sellars, in his paper, 'Volition and Basic Action', Freedom and Determinism (Random House, New York, 1966), pp. 105–139, construes volitions as immediate intentions.

12 Our notion of effective representations was anticipated in William James' formulation, in chapter XXVI of The Principles of Psychology, Vol. II (Henry Holt and Company, New York, 1890), of the 'ideomotor theory' of action (intended as a psychological theory, not a philosophical analysis). In discussing simple actions James says that 'there is nothing else in the mind but the kinaesthetic idea . . . of what the act is to be' (p. 493, but later (p. 521), is speaking of 'the anticipation of the movement's sensible effects, resident or remote', he does not require that the idea be kinaesthetic.


14 Myles Brand uses the phrase, 'moving to act', e.g., in 'The Fundamental Question in Action Theory', forthcoming, to designate the conative feature of the psychological antecedents of action. Incidentally, whereas perceptions move us to believe, it could be said that memories move us to continue to believe.